

10/729,197
December 27th, 2004
Reply to Office Action of 09/27/2004

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Amendments to the Claims

Please cancel claim 16.

This listing of the claims will replace all prior versions:

Listing of claims:

1. (Currently Amended) A method for converting a fiber optical signal to an electrical signal inside of a generator comprising:
 - supplying at least one fiber optic transmitter at a location is internal to the generator;
 - connecting to said fiber optic transmitter at least one optic vibration sensor to provide a vibration magnitude signal internal to the generator;
 - converting said vibration magnitude signal to an electrical signal on an electrical wire; and
 - exporting said electrical signal from said generator via a hermetic seal;
 - wherein the environment internal to the generator is at a greater pressure than the environment outside of the generator.
2. (Previously Presented) The method of claim 1, wherein the environment internal to the generator is substantially hydrogen gas.
3. (Previously Presented) The method of claim 1, wherein converting said vibration magnitude signal to said electrical signal is performed at a detector.
4. (Currently Amended) The method of claim 3, wherein said detector ~~preamplifies~~ preamplifies said electrical signal.
5. (Previously Presented) The method of claim 1, combining said electrical wire with at least one additional electrical wire into a device, wherein said device has fewer electrical wire outputs than inputs and wherein signals on said electrical

10/729,197
December 27th, 2004
Reply to Office Action of 09/27/2004

Via Facsimile

wire and said at least one additional electrical wire can be monitored via said electrical wire outputs.

6. (Currently Amended) The method of claim 5, wherein said device is a multiplexer.

7. (Currently Amended) The method of claim 5, wherein said device is located internal to said generator.

8. (Currently Amended) The method of claim 5, wherein said device is located external to said generator.

9. (Previously Presented) The method of claim 1, further comprising preamplifying said electrical signal.

10. (Previously Presented) The method of claim 1, further comprising amplifying said electrical signal.

11. (Currently Amended) A method for monitoring vibration inside of a generator comprising:

forming a seal on the wall of said generator, wherein said seal delineates a generator side and an outside;

originating an a fiber optic cable at said seal on the generator side;

transmitting an original optical signal on said fiber optic to a vibration sensor wherein said vibration sensor modifies said original optical signal to produce a modified optical signal;

receiving at a detector said modified optical signal wherein said detector is located on the generator side of said seal;

converting said modified optical signal to an electrical signal;

sending said converted electrical signal to a wire;

10/729,197
December 27th, 2004
Reply to Office Action of 09/27/2004

Via Facsimile

passing said wire from the generator side to the outside via a hermetic seal, wherein said hermetic seal is part of said seal; and
exporting said wire to a monitoring device.

12. (Previously Presented) The method of claim 11, wherein multiple seals are used on said generator, wherein the originating and receiving tasks are shared between said multiple seals.

13. (Previously Presented) A connector seal for converting an optical signal to an electrical signal comprising:

a seal delineating a boundary between a pressure environment and a regular environment;

at least one detector on said pressure environment side of said seal;

at least one fiber optic cable connected to said at least one detector wherein said at least one detector receives an optical signal from said at least one fiber optic and said detector converts said optical signal to an electrical signal;

at least one wire that originates on said pressure environment side of said seal that hermetically spans said boundary, wherein said at least one wire receives said electrical signal; and

a power wire originating on said regular environment side of said seal that hermetically spans said boundary and supplies power to at least one object.

14. (Currently Amended) The method of claim 13, wherein said at least one object is said detector.

15. (Currently Amended) The method of claim 13, wherein said electrical signal is amplified.

10/729,197

December 27th, 2004

Via Facsimile

Reply to Office Action of 09/27/2004

16. (Canceled) The method of claim 13, further comprising a reducer at least one wire to at least one fewer wire.

17. (Currently Amended) The method of claim ~~46~~ 13, wherein said at least one object is said a reducer.

18. (Currently Amended) The method of claim ~~46~~ 13, wherein said ~~reducer~~ object is a multiplexer.

19. (Currently Amended) The method of claim 13, wherein a control wire originating on said regular environment side of said seal that hermetically spans said boundary and controls at least one device.

20. (Previously Presented) The method of claim 13, wherein the number of said at least one wire is equal to or less than the number of said at least one fiber optic.